

REMARKS

This Amendment is in response to the Final Office Action mailed on November 26, 2010 and is being submitted together with a Request for Continued Examination. Reconsideration in view of the amendments and following remarks is requested.

Status of the Claims

Claims 1-15, 19-22 and 26-28 have been rejected. Claims 10 and 14 have been amended without the introduction of new matter. Claims 11 and 19-22 have been canceled without prejudice or waiver of the subject matter contained therein, which, in any event, is encompassed by the claims that remain. Claims 1-10, 14, 15, and 26-28 are pending.

Telephone Interview Summary/Claim Rejections Under 35 U.S.C. §112

Applicants wish to express their gratitude to Examiner Dougherty and Primary Examiner Hoekstra for the courtesy the Examiners showed Applicant's representatives during a telephone Interview conducted on May 18, 2011 regarding the present Office Action.

During the Interview, Applicant's representatives and the Examiners discussed the scope of the disclosure of the present application and the rejection of claims 1-15 and 19-28 under 35 U.S.C. § 112, first paragraph, in relation to the enablement requirement. The Examiners agreed that if claim 10 was amended to replace the term "factor of ambient compensation" with "a value between 0.1°C and 0.23°C," the 112 rejection of all these claims would be overcome by eliminating an ambiguity perceived with a hydration monitor predicated on such a factor. Accordingly, Applicant has amended claim 10. Withdrawal of the rejection of claims 1-15 and 19-28 under 35 U.S.C. § 112, first paragraph, is respectfully requested.

Claim Rejections Under 35 U.S.C. §101

Claim 14 has been amended to recite that the method steps are performed with a hydration monitor “having a processor.” Accordingly, claim 14 is now more clearly directed to statutory subject matter. Claim 15 depends from independent claim 14 and is allowable based on at least its dependency from an allowable base claim, and in view of its further recitations. Applicant respectfully requests withdrawal of the rejection.

Claim Rejections Under 35 U.S.C. §103

Claims 1-12, 14, 15, 19-22, 26 and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7,306,565 to Fraden et al. (“Fraden”) in view of the publication titled “Effect of hypohydration on core temperature during exercise in temperate and hot environments,” by Buono et al. (“Buono”).

The Applicant has previously submitted arguments through predecessor counsel regarding the rejection over Fraden in view of Buono. The Office has maintained its rejection. Applicant submits a new argument that more clearly shows the limited probative value of Buono to support reconsideration and a conclusion and that the claims, in fact, are patentable over Fraden in view of Buono.

Fraden discloses an ear temperature monitor and method of temperature measurement. Fraden’s disclosure may be pertinent to those considering issues related to sensing temperature in a person’s ear canal. However, Fraden is completely silent on the problem of hydration monitoring. Accordingly, a person of ordinary skill in the art faced with the problem of hydration monitoring would never consider Fraden in the first instance because Fraden is completely silent on the issue. It is only after having the benefit of Applicant’s present disclosure of using temperature measurement to determine hydration levels that one would, even for the sake of argument, consider Fraden. This is impermissible hindsight. Fraden is a temperature sensor and, without the benefit of Applicant’s disclosure, there is no reason why one of ordinary skill in the art would consider Fraden in an attempt to solve the problem of hydration monitoring – Fraden is completely silent in this regard. Accordingly, Fraden is an improper primary reference and Applicant respectfully submits that the rejection should be withdrawn for this reason alone.

Moreover, even assuming Fraden was a proper primary reference, the combination of Fraden in view of Buono fails to render the claimed invention obvious. As discussed in more detail below,

Buono teaches measuring the difference in a person's weight to determine hydration level. Thus, Buono actually teaches away from the claimed invention. The proposed combination of Fraden in view of Buono, would require ignoring the teaching of the weight based method of Buono and would thus destroy the purpose of Buono, in contravention to the provisions of the MPEP. Accordingly, the rejection should be withdrawn for this additional reason.

In the interest of advancing prosecution, Applicant preemptively addresses the modification of Buono in view of Fraden. Buono describes an experiment designed to determine the effect of hypohydration (i.e., dehydration) on core temperature during exercise. A fundamental requirement of the experiment is that the hydration state of each test subject must be known before the subject begins exercising. The method that Buono teaches for determining the hydration state of the subjects is disclosed on page 477, column 1 of Buono. As taught by Buono, in order to determine the hydration state of the subject person, the subject is told to drink a certain amount of water so that the subject reaches euhydration (i.e., the person is hydrated). The subject is then weighed and this weight is the baseline euhydration body mass value. Next, the subjects in the hypohydration group were told to restrict their fluid intake and to weigh themselves until they reach a body mass that indicated that they are hypohydrated. The subjects knew that they reached the hypohydration state when their current body mass was 5% less than their baseline body mass. When the subjects reported for the experiment, they were weighed and their current body mass was compared to their baseline body mass in order to confirm that they were 5% hypohydrated. Accordingly, Buono teaches that in order to determine the hydration state of a person, the person must be weighed and their current weight must be compared to his or her baseline weight.

Thus, Buono teaches a weight based system in order to determine hydration state. However, the Office contends that Buono teaches calculating a hydration level based on changes in measured core body temperature. If this were the case, then Buono would measure the *temperature* of the subjects to determine if the subjects were at the proper hydration level for the experiment. Buono does not teach this. Rather, Buono teaches that the subjects must be weighed and their weight must be compared to a base line weight to determine if the subjects are hydrated or dehydrated. Buono does not teach measuring *temperature* to determine the hydration state of a person. Buono actually teaches away from this by teaching that in order to determine the hydration state of a person, the weight of the person must be determined and compared to a baseline.

Independent claim 1 differentiates over Buono in reciting a hydration monitor that calculates “a hydration level in dependence on changes in the measured core body *temperature*.” Similarly, independent claim 14 recites a method for determining hydration based on *temperature* and independent 26 recites a hydration monitor that calculates hydration based on *temperature*. As discussed above, Buono does not teach determining hydration level based on changes in measured core body temperature. Instead, Buono teaches determining the hydration level based on changes in measured body mass.

Fraden teaches an ear temperature monitor. However, there is no teaching or suggestion in Fraden to use body temperature measurements to determine a hydration level. As such, a person of ordinary skill in the art having considered the weight based teachings of Buono would not look to the temperature sensor solution of Fraden to create a hydration monitor, because Buono teaches measuring weight differences to determine hydration levels and Fraden discloses a temperature sensing device. Accordingly, neither Buono nor Fraden, either alone nor in combination teach or suggest each and every element of independent claims 1, 14, and 26. Rather, Buono actually teaches away from the claimed invention in that Buono teaches measuring differences in weight to determine hydration levels. Applicant respectfully request withdrawal of the rejection of independent claims 1, 14, and 26, and the claims that depend therefrom for at least this reason and their further recitations.

Dependent claims 13 and 28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fraden in view of Buono, as applied to claim 1, and further in view of U.S. Patent No. 6,138,079 to Putnam (“Putnam”).

Putnam discloses a device for calculating fluid loss per hour of exercise. The device does not measure the temperature of a person and determine hydration levels of the person based on changes in temperature. Accordingly, Putnam does not cure the deficiencies of Buono (which is based on differences in weight) or Fraden, as discussed above. Claims 13 and 28 depend from independent claims 1 and 26, respectively. Claims 13 and 28 are allowable based at least upon their dependency from allowable claims 1 and 26, and further in view of their further recitations. Applicant respectfully requests withdrawal of the rejection.

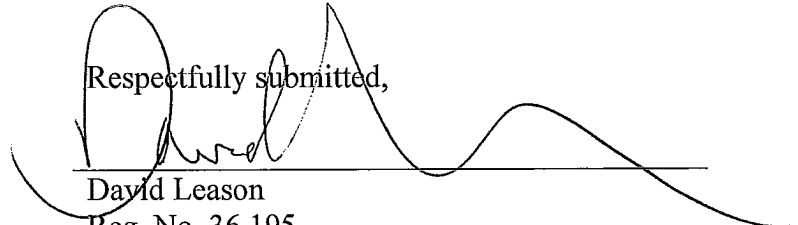
CLOSING REMARKS

The Examiner is requested to contact the undersigned at the telephone number indicated below if the Examiner believes any issue can be resolved through either a Supplemental Response or an Examiner's Amendment.

The Commissioner is hereby authorized to charge any unpaid fees deemed required in connection with this submission, or to credit any overpayment, to Deposit Account No. 50-4570.

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Respectfully submitted,



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